2. The nucleic array of claim 1 comprising all of the sequences from Appendix 1.

3. The nucleic acid array of claim 1 wherein the nucleic acids are cDNAs.

4. The nucleic acid array of claim 1 wherein the nucleic acids are oligonucleotides.

5. The nucleic acid array of claim 1, wherein the array is supported on a solid support selected from the group consisting of a glass slide and a silicon chip.

6. (Once amended) An isolated nucleic acid comprising a sequence corresponding to or complementary to a sequence of not less than 20 contiguous nucleotides of any one of the sequences of Appendix 1 (SEQ ID NOS:2-742).

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7. (Once amended) The nucleic acid of claim 6 wherein the sequence consists of [the] a sequence of Appendix 1 (SEQ ID NOS:2-742), or [the] a complement thereof.

8. (Once amended) The nucleic acid of claim 6 wherein the sequence lacks any homology to a known sequence as set forth in the list in Appendix 1 (SEQ ID NOS:2-742).

As cont.

9. Method for detecting differential expression of embryonic genes, which method comprises:

(a) contacting a nucleic acid array comprising one or more genes expressed in embryonic cells but not in mature cells with a sample nucleic acid preparation and a control nucleic acid preparation, wherein the sample nucleic acid preparation and control nucleic acid preparation contain nucleic acids expressed by sample cells and control cells, respectively, and

(b) detecting differential hybridization of nucleic acids from sample cells relative to control cells to nucleic acids in the array.

10. The method according to claim 9 wherein the sample nucleic acids are mRNAs.

11. The method according to claim 9, wherein the sample nucleic acids are cDNAs produced by reverse transcriptase-polymerase chain reaction (RT-PCR).

12. The method according to claim 11, wherein the sample nucleic acid preparation and the control nucleic acid preparation are each labeled with different labels.

13. The method according to claim 12, wherein the sample nucleic acids are labeled with fluorescent tags.

14. The method according to claim 9, wherein the array is supported on a solid support selected from the group consisting of a glass slide and a silicon chip.

15. The method according to claim 9, wherein the sample cells are at a different developmental point during embryogenesis relative to the control cells.

16. The method according to claim 9, wherein the sample cells are located in a different region of an embryo compared to the control cells.

17. The method according to claim 9, wherein the sample cells are contacted with an external stimulus and the control cells are contacted with a sham stimulus or no stimulus.

18. The method according to claim 17, wherein the cells are contacted with a gene encoding a known gene product.

19. The method according to claim 17, wherein the cells are contacted with a gene encoding an unknown gene product.

20. The method according to claim 17, wherein the sample cells are contacted with a drug.

21. The method according to claim 17, wherein the sample cells are contacted with an environmental toxin.

22. The method according to claim 17, wherein the sample cells are irradiated.

23. (Once amended) The method according to claim 9, wherein the nucleic acid array contains one or more sequences from Appendix 1 (SEQ ID NOS:2-742).

24. Method for detecting defects in development, which method comprises contacting nucleic acids from test cells undergoing development with a nucleic acid array of gene products known to play a fundamental role in the development process, and detecting a difference in expression of a fundamental gene in the sample cells relative to a standard.

25. The method according to claim 24, wherein the standard is a standard derived from expression in a normal cell.

26. The method according to claim 24, wherein the nucleic acid array comprises one or more sequences as set forth in Appendix 1, or the complement thereof, or a hybridizable fragment thereof.

27. The method according to claim 24, wherein a difference in gene expression in test cells relative to normal cells is indicative of a developmental defect.